

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関
国際事務局(43) 国際公開日
2004年2月12日 (12.02.2004)

PCT

(10) 国際公開番号
WO 2004/013173 A1

- (51) 国際特許分類⁷: C07K 14/47, C12N 15/12, 5/10, 1/15, 1/19, 1/21, C12P 21/02, C12Q 1/02, A61K 45/00, A61P 9/10, 43/00
- (74) 代理人: 森田 憲一, 外(MORITA, Kenichi et al.); 〒173-0004 東京都板橋区板橋二丁目6番8号板橋中央ビル5階 Tokyo (JP).
- (21) 国際出願番号: PCT/JP2003/009732
- (22) 国際出願日: 2003年7月31日 (31.07.2003)
- (25) 国際出願の言語: 日本語
- (26) 国際公開の言語: 日本語
- (30) 優先権データ:
特願2002-225114 2002年8月1日 (01.08.2002) JP
特願2003-182989 2003年6月26日 (26.06.2003) JP
- (71) 出願人 (米国を除く全ての指定国について): 山之内製薬株式会社 (YAMANOUCHI PHARMACEUTICAL CO., LTD.) [JP/JP]; 〒103-8411 東京都中央区日本橋本町二丁目3番11号 Tokyo (JP).
- (72) 発明者; および
- (73) 発明者/出願人 (米国についてのみ): 野沢 桂 (NOZAWA, Katsura) [JP/JP]; 〒305-8585 茨城県つくば市御幸が丘2-1 山之内製薬株式会社内 Ibaraki (JP).
望月 忍 (MOCHIZUKI, Shinobu) [JP/JP]; 〒305-8585 茨城県つくば市御幸が丘2-1 山之内製薬株式会社内 Ibaraki (JP).
- (81) 指定国 (国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) 指定国 (広域): ARIPO 特許 (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ特許 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI 特許 (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- 添付公開書類:
— 国際調査報告書
- 2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

(54) Title: NOVEL POTASSIUM-DEPENDENT SODIUM-CALCIUM EXCHANGER

(54) 発明の名称: 新規なカリウム依存的ナトリウム-カルシウム交換体

(57) Abstract: It is intended to disclose a novel polypeptide; a polynucleotide encoding the above polypeptide; an expression vector containing the above polynucleotide; cells transfected with the above expression vector; a process for producing the above polypeptide; and a convenient screening method for obtaining a substance which is useful in treating cell injury or an inflammatory disease due to postischemic reperfusion. The above-described polypeptide is a potassium-dependent sodium-calcium exchanger expressed in peripheral leucocytes.

(57) 要約: 新規のポリペプチド、前記ポリペプチドをコードするポリヌクレオチド、前記ポリヌクレオチドを含む発現ベクター、前記発現ベクターでトランスフェクションされた細胞、前記ポリペプチドの製造方法、及び虚血後の再灌流による細胞傷害治療又は炎症性疾患治療に有用な物質を得るための簡便なスクリーニング系を開示する。前記ポリペプチドは、末梢白血球において発現している、カリウム依存的ナトリウム-カルシウム交換体である。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/09732

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C07K14/47, C12N15/12, C12N5/10, C12N1/15, C12N1/19,
C12N1/21, C12P21/02, C12Q1/02, A61K45/00, A61P9/10,
A61P43/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C07K14/47, C12N15/12, C12N5/10, C12N1/15, C12N1/19,
C12N1/21, C12P21/02, C12Q1/02, A61K45/00, A61P9/10,
A61P43/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
JSTPlus (JOIS), SwissProt/PIR/GeneSeq, Genbank/EMBL/DDBJ/GeneSeq,
BIOSIS (DIALOG), WPI (DIALOG)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/26980 A2 (Lexicon Genetics Inc.), 04 April, 2002 (04.04.02), Sequence No. 2 & EP 1325126 A2 & US 2002/0107380 A1	1-17
<u>X</u> Y	JP 09-067336 A (Kanebo, Ltd.), 11 March, 1997 (11.03.97), Full text & WO 97/09306 A1	<u>12-13</u> 10-11, 15, 17
X	Siegl P.K. et al., Inhibition of Na ⁺ /Ca ²⁺ exchange in membrane vesicle and papillary muscle preparations from guinea pig heart by analogs of amiloride, Proc.Natl.Acad.Sci.USA, 1984, Vol.81, No.10, pages 3238-42	12-13

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not
considered to be of particular relevance
"E" earlier document but published on or after the international filing
date
"L" document which may throw doubts on priority claim(s) or which is
cited to establish the publication date of another citation or other
special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other
means
"P" document published prior to the international filing date but later
than the priority date claimed

"T" later document published after the international filing date or
priority date and not in conflict with the application but cited to
understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be
considered novel or cannot be considered to involve an inventive
step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be
considered to involve an inventive step when the document is
combined with one or more other such documents, such
combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search
05 September, 2003 (05.09.03)

Date of mailing of the international search report
24 September, 2003 (24.09.03)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.